

TECH CENTER 1600/2900



1600

Page 1 of 7

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/765,555A

DATE: 10/31/2002 TIME: 17:33:34

Input Set : D:\27801-20014.txt

Output Set: N:\CRF4\10312002\I765555A.raw

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3 <110> APPLICANT: The Scripps Research Institute
                                                              ENTERED
        Barbas, Carlos
         Stege, Justin
        Guan, Xueni
 6
        Dalmia, Bipin
 7
 9 <120> TITLE OF INVENTION: Methods and compositions to modulate
        expression in plants
12 <130> FILE REFERENCE: 27801-20014.20
14 <140> CURRENT APPLICATION NUMBER: 09/765,555A
15 <141> CURRENT FILING DATE: 2001-01-19
17 <150> PRIOR APPLICATION NUMBER: 09/620,897
18 <151> PRIOR FILING DATE: 2000-07-21
20 <150> PRIOR APPLICATION NUMBER: US 60/177,468
21 <151> PRIOR FILING DATE: 2000-01-21
23 <160> NUMBER OF SEQ ID NOS: 75
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29 <212> TYPE: DNA
30 <213> ORGANISM: Artificial Sequence
32 <220> FEATURE:
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38 atatgcaacc tatgttcaaa aatgaagaat gtacagatac aagatcctat actgccagaa
                                                                          180
39 tacgaagaag aatacgtaga aattgaaaaa gaagaaccag gcgaagaaaa gaatcttgaa
                                                                          240
                                                                          300
40 gacgtaagca ctgacgacaa caatgaaaag aagaagataa ggtcggtgat tgtgaaagag
41 acatagagga cacatgtaag gtggaaaatg taagggcgga aagtaacctt atcacaaagg
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42 aatottatce eccactactt atcettttat attttteegt gteatttttg eccttgagtt
                                                                          420
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43 ttcctatata aggaaccaag ttcggcattt gtgaaaacaa gaaaaaattt ggtgtaagct
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44 attttctttg aagtactgag gatacaactt cagagaaatt tgtaagtttg ta
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49 <213> ORGANISM: Artificial Sequence
51 <220> FEATURE:
52 <223> OTHER INFORMATION: Zinc finger protein 2C7 binding site
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57 <210> SEQ ID NO: 3
58 <211> LENGTH: 51
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59 <212> TYPE: DNA

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113 caccttacca cccacatccg cacccacaca ggcgagaagc cttttgcctg tgacatttgt

2220

RAW SEQUENCE LISTING

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Input Set : D:\27801-20014.txt

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|-----|-----------------------|---------------|-------------|---|------------|------|
| 115 | aagccctatg cttgccctgt | cgagtectge | gategeeget | tttctaagtc | ggctgatctg | 2340 |
| 117 | aagcgccata tccgcatcca | cacagggggg | aagcccttcc | agtgtcgaat | atgcatgcgt | 2400 |
| 110 | aacttcagtc gtagtgacca | cottaccacc | cacatececa | cccacacagg | cgagaagcct | 2460 |
| 11/ | tttgcctgtg acatttgtgg | gaggaagttt | accadaagta | atgaacgcaa | gaggcatacc | 2520 |
| 118 | aaaatccatt taagacagaa | gaggaageee | actagtages | addccadcca | gactageeea | 2580 |
| 119 | aaaaagaaac gcaaagttgg | ggaccccaga | accayeggee | atttcgatct | cgacatgetg | 2640 |
| 120 | ggttctgatg ccctcgatga | gegegeegae | gegetggaeg | gaagegaege | attggatgac | 2700 |
| 121 | ggttctgatg ccctcgatga | ctttgacetg | gatatyttyy | tagatataga | tatattaatt | 2760 |
| 122 | tttgatctgg acatgctcgg | ctccgatgct | ciggacgail | togatotoga | agaggggagg | 2820 |
| 123 | aactacccgt acgacgttcc | ggactacgct | ccccgagaac | tegeggeege | gggcccgagc | 2880 |
| 124 | ctagggagga gctcaagatc | ccccgaattt | ccccgatcgt | tcaaacattt | ttetetteaa | 2940 |
| 125 | tttcttaaga ttgaatcctg | ttgccggtct | tgcgatgatt | atcatctaat | ttctgttgaa | 3000 |
| 126 | ttacgttaag catgtaataa | ttaacatgta | atgcatgacg | ttatttatga | gatgggtttt | |
| 127 | tatgattaga gtcccgcaat | tatacattta | atacgcgata | gaaaacaaaa | tatagegege | 3060 |
| 128 | aaactaggat aaattatcgc | gcgcggtgtc | atctatgtta | ctagatccgg | gaattgggta | 3120 |
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| 132 | <211> LENGTH: 3069 | | | | | |
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| 137 | <223> OTHER INFORMATI | ON: pND3018 | coding red | ion | | |
| 139 | <400> SEOUENCE: 5 | | | | | |
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| 141 | aaattaccac atatttttt | tgtcacactt | gtttgaagtg | cagtttatct | atctttatac | 120 |
| 142 | atatatttaa actttactct | acqaataata | taatctatag | tactacaata | atatcagtgt | 180 |
| 143 | tttagagaat catataaatg | aacagttaga | catggtctaa | aggacaattg | agtattttga | 240 |
| 144 | caacaggact ctacagtttt | atctttttag | tgtgcatgtg | ttctcctttt | tttttgcaaa | 300 |
| 145 | tagetteace tatataatae | ttcatccatt | ttattagtac | atccatttag | ggtttagggt | 360 |
| 146 | taatggtttt tatagactaa | tttttttagt | acatctattt | tattctattt | tagcctctaa | 420 |
| 147 | attaagaaaa ctaaaactct | attttagttt | ttttatttaa | taatttagat | ataaaataga | 480 |
| 148 | ataaaataaa gtgactaaaa | attaaacaaa | taccctttaa | gaaattaaaa | aaactaagga | 540 |
| 149 | aacatttttc ttgtttcgag | tagataatgc | cagcctgtta | aacgccgtcg | acgagtctaa | 600 |
| 150 | cggacaccaa ccagcgaacc | agcagcgtcg | cqtcqqqcca | agcgaagcag | acggcacggc | 660 |
| 151 | atctctgtcg ctgcctctgg | accepteteg | agagttccgc | tccaccgttg | gacttgctcc | 720 |
| 152 | gctgtcggca tccagaaatt | gcgtggcgga | gcggcagacg | tgagccggca | cggcaggcgg | 780 |
| 153 | cctcctcctc ctctcacggc | acggcagcta | cagaggatte | ctttcccacc | gctccttcgc | 840 |
| 154 | tttcccttcc tcgcccgccg | taataaatag | acaccccctc | cacaccctct | ttccccaacc | 900 |
| 155 | tcgtgttgtt cggagcgcac | acacacacaa | ccagatetee | cccaaatcca | cccgtcggca | 960 |
| 156 | cctccgcttc aaggtacgcc | acticaticatic | cccccccc | cctctctacc | ttctctagat | 1020 |
| 157 | cggcgttccg gtccatggtt | agggccggt | agttctactt | ctgttcatgt | ttgtgttaga | 1080 |
| 150 | teegtgtttg tgttagatee | gtgctgctag | cgttcgtaca | cagatacaac | ctgtacgtca | 1140 |
| 150 | gacacgttct gattgctaac | ttaccaatat | ttctctttaa | ggaatectgg | gatggctcta | 1200 |
| 160 | gccgttccgc agacgggatc | datttcatda | tttttttat | ttcgttgcat | agggtttggt | 1260 |
| 161 | ttgccctttt cctttatttc | aatatatoo | atacacttat | ttatcaaatc | atcttttcat | 1320 |
| 163 | gettttttt gtettggttg | tratratra | atctaattaa | acaatcatto | tagatcggag | 1380 |
| 162 | tagaattctg tttcaaacta | cctaataast | ttattaattt | tagatetata | tatatatacc | 1440 |
| 164 | atacatattc atagttacga | attgaagatg | atagatagaa | atategatet | aggataggta | 1500 |
| 104 | tacatgttga tgcgggtttt | actuaturat | atacadadat | actttttatt | cacttaatta | 1560 |
| тоэ | cacacyciya cycyyyttic | accyacycac | _ cacagagac | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ر ر | |
| | | | | | | |

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| 166 | tgatgatgtg gtgtggttgg | acaatcatto | attcgttcta | gatcggagta | gaatactgtt | 1620 | | | |
|-----|---|-------------|------------|------------|------------|------|--|--|--|
| 167 | tcaaactacc tggtgtattt | attaattttg | gaactgtatg | tatatatcat | acatcttcat | 1680 | | | |
| 160 | agttacgagt ttaagatgga | togaaatato | gatctaggat | aggtatacat | gttgatgtgg | 1740 | | | |
| 160 | gttttactga tgcatataca | tgatggcata | tgcagcatct | attcatatqc | tctaaccttq | 1800 | | | |
| 170 | agtacctatc tattataata | aacaagtatg | ttttataatt | attttgatct | tgatatactt | 1860 | | | |
| 171 | ggatgatggc atatgcagca | gctatatgtg | gatttttta | gccctgcctt | catacgctat | 1920 | | | |
| 172 | ttatttgctt ggtactgttt | cttttgtcga | tgctcaccct | attatttaat | gttacttctg | 1980 | | | |
| 173 | caggtcgact ctagaggatc | cactagtgag | ccatgggcta | gcatggccgc | taccatacac | 2040 | | | |
| 174 | atgaacatcc agatgctgct | caaaaccact | gattatctgg | aacgccggga | gcgcgaagcc | 2100 | | | |
| 175 | gagcacggct acgccagcat | actaccatat | сспааааада | aacgcaaggt | ggcccaggcg | 2160 | | | |
| 176 | gccctcgagc tcccctatgc | ttaccctatc | gagtectgeg | atcgccgctt | ttctaagtcg | 2220 | | | |
| 177 | gctgatctga agcgccatat | concatorac | acangccaga | agcccttcca | gtgtcgaata | 2280 | | | |
| 170 | tgcatgcgta acttcagtcg | tagtgaccac | cttaccaccc | acatecgcae | ccacacaggc | 2340 | | | |
| 178 | gagaageett ttgeetgtga | caststataaa | aggaagtttg | ccaggagtga | tgaacgcaag | 2400 | | | |
| 1/9 | aggcatacca aaatccatac | cattegeggg | agguageeeg | accetatea | atcctacaat | 2460 | | | |
| 180 | cgccgctttt ctaagtcggc | tastatassa | ccccatgecc | gcatccacac | addccadaad | 2520 | | | |
| 181 | cccttccagt gtcgaatatg | catacatasa | ttgagtggta | gtgaccacct | taccacccac | 2580 | | | |
| 182 | atccgcaccc acacaggcga | gaaggettt | gastatasas | tttataggag | gaagtttgcc | 2640 | | | |
| 183 | atccgcaccc acacaggcga | gaageettt | geergrada | annagangan | ctctagaact | 2700 | | | |
| 184 | aggagtgatg aacgcaagag | gcalaccada | attegggage | acayaayya | aaaacttaat | 2760 | | | |
| 185 | agtggccagg ccggccagta | ceegtacgac | tagttgaaa | atttaggaat | aaagtttctt | 2820 | | | |
| 186 | accgageteg gatececega | atttccccga | ccylicadac | taatttatat | tgaattacgt | 2880 | | | |
| 187 | aagattgaat cctgttgccg | greergegar | gattateate | atangataga | tttttatgat | 2940 | | | |
| 188 | taagcatgta ataattaaca | tgtaatgcat | gacgitatic | acyayacyyy | gagaaaacta | 3000 | | | |
| 189 | tagagtcccg caattataca | tttaatacgc | galagaaac | aaaacacagc | gegeaaacta | 3060 | | | |
| | ggataaatta tcgcgcgcgg | tgtcatctat | gttactagat | cegggaatte | Cygaccygta | 3069 | | | |
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| 203 | ggcggcgtgg gcgactagtg | ctagcgcgtg | ggcggcgrgg | gegaaeaage | gradacadea | 156 | | | |
| | tyggegaaca agegegggeg gegegggega eeageg | | | | | | | | |
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| | <213> ORGANISM: Artif | icial Seque | nce | | | | | | |
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- 223 <223> OTHER INFORMATION: ZFP from -85 to -65
- 225 <400> SEQUENCE: 8
- 226 gcctccttcc tcctctcact c
- 228 <210> SEQ ID NO: 9
- 229 <211> LENGTH: 18
- 230 <212> TYPE: DNA
- 231 <213> ORGANISM: Artificial Sequence
- 233 <220> FEATURE:
- 234 <223> OTHER INFORMATION: ZFPml from -68 to -85
- 236 <400> SEQUENCE: 9
- 237 tgagaggagg aaggaggc 239 <210> SEQ ID NO: 10
- 240 <211> LENGTH: 18
- 241 <212> TYPE: DNA
- 242 <213> ORGANISM: Artificial Sequence
- 244 <220> FEATURE:
- 245 <223> OTHER INFORMATION: ZFPm2 from -65 to -82
- 247 <400> SEQUENCE: 10
- 248 gagtgagagg aggaagga
- 250 <210> SEQ ID NO: 11
- 251 <211> LENGTH: 24
- 252 <212> TYPE: DNA
- 253 <213> ORGANISM: Artificial Sequence
- 255 <220> FEATURE:
- 256 <223> OTHER INFORMATION: ZFP from 294 to 317
- 258 <400> SEOUENCE: 11
- 261 <210> SEQ ID NO: 12

259 gccaactact acggctccct cacc

- 262 <211> LENGTH: 18
- 263 <212> TYPE: DNA
- 264 <213> ORGANISM: Artificial Sequence
- 266 <220> FEATURE:
- 267 <223> OTHER INFORMATION: ZFPm3 from 311 to 294
- 269 <400> SEQUENCE: 12
- 270 ggagccgtag tagttggc
- 272 <210> SEQ ID NO: 13
- 273 <211> LENGTH: 18
- 274 <212> TYPE: DNA
- 275 <213> ORGANISM: Artificial Sequence
- 277 <220> FEATURE:
- 278 <223> OTHER INFORMATION: ZFPm4 from 317 to 300
- 280 <400> SEQUENCE: 13
- 281 ggtgagggag ccgtagta
- 283 <210> SEQ ID NO: 14
- 284 <211> LENGTH: 3300 285 <212> TYPE: DNA
- 286 <213> ORGANISM: Artificial Sequence
- 288 <220> FEATURE:
- 289 <223> OTHER INFORMATION: Partial sequence of pMal-ml and zinc finger

VERIFICATION SUMMARY

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L:1103 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:52